~~NOT FOR RELEASE~~
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Attached was prepared by Ray Cline and All Ullberg for input to Mr. James E. Webb for briefing the President. The President was in Texas so that Mr. Webb briefed Mr. Califano and staff (it was taped), leaving a copy of the attached for the President to read.

According to Ullberg, President Johnson visited Harry S. Truman recently to sign the Medicare legislation, pointing out that it took twenty years for basic legislation to result after it was first proposed. Perhaps in the same vein, President Johnson asked all Cabinet Officers to brief him on the accomplishments of their agency the past ten years, and what would likely be a consequence ten or twenty years later. This then, was Mr. Webb's response.

EME

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October 14, 1968

PRESENTATION TO THE PRESIDENT

Good afternoon, Mr. President. Thank you for this opportunity to describe the accomplishments of the National Aeronautics and Space Administration during the past ten years, and to discuss some of the opportunities which the National space program is opening up for the next period of ten to twenty years.

As you know from your active leadership role in it, the National Aeronautics and Space Administration was established ten years ago. NASA was the Nation's organizational answer to the USSR's confidence-shattering challenges to our scientific, technological, and educational position as the Soviets demonstrated large new national capabilities through their successes in space.

The policy underlying the activities called for in the Space Act was that "activities in space should be devoted to peaceful purposes for the benefit of all mankind." The Act made clear that "the general welfare and security of the United States require that adequate provisions be made for aeronautical and space activities," and that these activities, except for those "peculiar to or primarily associated with weapons systems and military operations, shall be the responsibility of, and shall be directed by, a civilian agency exercising control over aeronautical and space activities sponsored by the United States."

Supplementing these policies, this far-sighted law directs that this country's activities in space and aeronautics shall be so conducted as to contribute to the expansion of human knowledge about space and aeronautics, the preservation of our nation's leadership role in the technology of aeronautics and space flight, and to further its peaceful applications. NASA was directed to cooperate with other nations in carrying out its programs and in the peaceful application of the results. In a more pragmatic vein, NASA was directed to make available to agencies directly concerned with national defense "discoveries" with military significance and to cooperate with all other agencies which have an interest in our work. Thus, a heavy load was laid upon this agency ten years ago -- one including responsibilities which have affected nearly all segments of our national society and have related closely to our international relationships.

In the first ten years, working with the Department of Defense, the AEC, and many other agencies of our government such as the Weather Bureau, we developed a national launch vehicle program and built a large capability to launch spacecraft. We developed programs in science, in technology and in practical applications which made clear that the Soviet Union could not, in the new arena of space, proceed as the unchallenged leader. We have thus relieved national and international anxieties about the United States potential vis-a-vis the Soviets. The importance of this demonstration is emphasized by the fact that a new bar eter of national capability, national position and trends that predict the future is now widely recognized: the barometer of space capability and space accomplishment. If the United States is to retain its position of world leadership, we shall have to recognize that this barometer will be read by millions as an indicator of our response to a decisive challenge in years immediately ahead and also well into the future.

NASA has marshalled large segments of the nation's resources and applied them to an endeavor, which is essentially peaceful in nature and of a magnitude virtually unequalled outside of wartime activity. We met a national challenge with a truly national response. We combined the three sectors of government, industry and universities into a large unified but not bureaucratized national capability. We did this in a way which recognized the importance of preserving the individual characteristics and goals of strong existing instititutions of our society while at the same time moving swiftly to meet our aeronautical and space program objectives. At the peak of our program over 400,000 people, a large proportion of whom were scientists and engineers, were participating throughout all the States of the.

Union. About 20,000 industrial firms and 200 universities have taken part. NASA's capital plant, or facilities base, including an impressive array of unique structures and equipments, has been expanded from a value at a cost of less than $1 billion to more than $4 billion. We have demonstrated that the United States can develop a way to work toward a great national goal without the forcing motivation of war.

The creation of the NASA system and its developed capability has provided a great technology resource -- one capable of maintaining for many years a cutting edge of innovation over a broad spectrum of basic and applied science and technology. This capability can be brought to bear on the nation's future objectives in aeronautics and space. With proper foresight and leadership, it can also be brought to bear on many other national needs where technology is an important consideration.

As to the application of this capability to space goals over the next ten to twenty years, we now have in being the basic resource elements to support foreseeable program objectives. Major installations exist for the fabrication, assembly, test and launch of large space systems. A highly versatile complex to control missions in flight has been constructed and proved effective in operation. Our tracking and data acquisition network girds the world and is now able to track, control, and receive data from spacecraft at distances ranging from a few hundred miles in near-earth orbit, to hundreds of millions of miles in the vicinity of the near-planets.

The past ten years have witnessed the rapid evolution of a spacefaring capability that has enabled this nation to conduct a large variety of missions and probes into earth orbit, to the Moon, to the planets, and towards the sun. Our ability to orbit payloads has increased from less than 50 pounds, with Jupiter and Vanguard vehicles of the late 1950's, to about 280,000 pounds with the Saturn V which is about to come on stream. We have assembled a launch vehicle family with booster power ranging from the Scout's 88,000 pounds of thrust at lift-off to the Saturn V's 7-1/2 million pounds. These significant advances in large booster propulsion capability, the area which caused the greatest concern in the early days are directly attributable to the development of powerful and efficient propulsion systems. The Kerosene-fueled primary propulsion systems used to launch the Saturn boosters from Cape Kennedy are the culmination of phased steps in development, beginning in the 1950's with adaptations of military propulsion systems, to the H-1 engine, and finally to the F-1, which clustered in a configuration of 5 is used to launch the Saturn V. One of the most significant advances in launch vehicle technology during this first period has been the breakthrough in the use of liquid hydrogen as a fuel for the upper stages of our Saturn boosters.

In our manned program, during these first ten years, we have been able to move from the realm of speculation concerning man's ability to survive in space to a series of demonstrations that man can, in fact, survive and that he can perform many useful functions both within his spacecraft and outside his spacecraft while in orbit. We have demonstrated with increasingly sophisticated space vehicles that man in space can effectively steer and control these vehicles and that he can maneuver, speed up, slow down, change orbits and meet with and join other spacecraft. We have also demonstrated that man can perform a number of significant scientific and technical experiments. One example is the 1400 color pictures produced in the Gemini program which have made useful contributions to oceanography and geology. Also in the manned area, we have demonstrated the ability to precisely control re-entry and landing on water of the spacecraft as well as the ability of recovery forces to effect prompt, efficient pick-up.

The first ten years of our space program have seen a broad-gauged approach to the application of our space technology to some of the larger problems that face this nation and this planet. We still have a long way to go and many problems to overcome before we can say that we have arrived at the stage where proven techniques are ready to be applied to most of these problems. But some techniques have been proven, and demonstrate that the potential and the possibilities are there. We have in NASA's first ten years taken a number of significant first steps. With the development of the required technology to place a satellite into an orbit at a fixed position above the earth, we have also been able to demonstrate the feasibility of continuous viewing and the benefit this has for various types of earth observation. In meteorology, for example, our weather satellites are now receiving pictures of the clouds which cover large global areas as a service to hurricane watches and tornado alerts. In communications, we have moved through progressive phases until we now have operational point-to-point satellites providing continuous communications services to many points in the world. We have established reliable and cost-effective intercontinental telephone and television transmission. In navigation and traffic control, our programs have been aimed at the twin problems of increased air traffic congestion and accurate identification of the location of aircraft, ships and balloons. In this area we are moving forward in the development of new techniques and have actually tested several approaches in technology satellites.

We have achieved significant preliminary results in unmanned lunar exploration with our Ranger, Surveyor and Orbiter spacecraft.

We have photographed essentially the entire lunar surface in a degree of detail thus far not possible with earth-bound telescopes. We have obtained the first direct chemical analysis of the lunar soil. We have gathered information in support of the Apollo program which indicates that the lunar surface is sufficiently firm and topographically acceptable in certain areas to support a manned lunar landing attempt.

Our planetary probes have unlocked some of the secrets of both Mars and Venus. We photographed the surface of Mars in 1965 revealing an all-crater surface for the first time. We have made the first detailed analysis of the hot, high-pressure atmosphere of Venus.

We have made major additions to our knowledge about earth-sun relationships, including such data as the frequency of solar outburts and their effects on earth. We have obtained important data, such as the existence of the Van Allen radiation belt, regarding the nature of the near-space environment, and are proceeding with investigations on the influence of these phenomena on such things of much importance to man here on earth as his weather, radiation effects and influence of solar storms on communications systems.

In aeronautics, the past ten years have been, for the most part, a period of intense application and refinement of the capability developed initially during the 1945 to 1955 time period. Our work has been in support of both commercial and military aircraft.

Underlying all of these accomplishments are the significant technological advances, in and out of government, to develop new materials, devise new structures and build the complex electronic, mechanical and chemical systems and equipments of high reliability for the extremes of service imposed by aircraft and space vehicles. This new technology, in composite, is bringing with it revolutionary change in the way of making and testing things, not only for space systems, but for innumerable other non-space services, processes and materials.

The foregoing presents, in general terms, what may be regarded as the main thrust of our program during its first ten years. During this period we have established the U. S. as a world space power, but it would not be correct to say that we have achieved our objective, stated in the Space Act, of preeminence in space.

To date, NASA has received about $35 billion in funded appropriations. During the early period the program was funded at a level calculated to meet its approved program needs. However, beginning in 1965, in view of other pressing national priorities and problems, we have not been able to obtain the level of funding required to continue the buildup of experience required to achieve preeminence in space. In fact, in view of the step-up in Soviet activity, it is fair to say that we have been slipping farther behind for the past year or two. Our funding during this period has enabled us to continue approved programs but provided very little margins for unforeseen difficulties or to move forward with new starts. There has been very little to invest in the advanced technology work which is vital to a meaningful step forward in the next generation of space systems.

We have attempted to preserve, as best we could during this period, the unique capability we built up during the early years, But major reductions cannot be avoided at FY 1969 funding levels, and we are now making sizable cuts in our resource base. By July 1, 1969 more than 50% of the work force which peaked at about 400,000 people in early 1966 has been removed from the rolls. Of the 200,000 reduction we are now completing, 40,000 were the construction forces which built our facilities. Some people are leaving because they now see little opportunity in NASA. Among them are some with rare skills which may be very difficult to replace when the program returns to more adequate levels. We are consolidating and reducing our baseurces base, and will eventually close down and mothball a number of facilities.

Looking forward, I believe we should address the next twenty years in the context of the present. The curtailed level of effort today will have great impact on where we will be ten to twenty years hence.

As we look into the future, other factors must also be taken into account. Forecasting for a research and development enterprise is fraught with peril. It has been said that R&D planners generally overestimate what they can do in the short term but vastly underestimate in projections for the long term. Many imponderables confront the space program: what the Soviets may do in space; a sudden shift in international commitments; an unexpected and dramatic technological breakthrough; a re-structuring of domestic priorities. Any of these could drastically alter the pace and content of our space pmogram in the next decade and could render meaningless a present projection of what we could or should do.

However, I believe this nation will resist tendencies and pressures to "turn inward" and reject the opportunities it will have to work with other nations.

It is my view that this nation will eventually have to reconsider its present priority ranking of the space program and return to the objective of preeminence in space. There is no turning back from the problems and opportunities associated with man's ability to enter and use space.. Even if the decision is made to have no space program at all, for a few years the Soviet challenge, the potential military ramifications, and the imperatives of advanced technology as a cornerstone of any structure of national power will eventually drive us back into space.

I believe that our obligation in approaching the future should be to fulfill the promise of the first ten years, by using and further developing the capabilities and potentials which have been built. Our planning efforts, which have been carried out with this thought in mind have resulted in a series of proposals which have been included in the NASA FY 1970 budget.

The first proposal is that the nation should begin now to take the first, phased steps toward the objective of placing a permanent manned station in earth orbit. Such a station would consist of a command post and modules or sections, each of which would be directed to specific mission objectives, such as earth resources survey, educational broadcasting or military application. A noteworthy feature of such a station is that it would provide a central capability on a global basis for the collection, storage and dissemination of critical information relating to each of the missions being served. We believe a multi-mission station would be more economical because many service and utility functions could be provided centrally from a general service module. Other modules would be used to test systems and components intended for long-duration missions into deeper space. Still other modules would serve as observation platforms to study the heavens. Finally, a biomedical research facility on board the station would be employed to continue investigations on man's physiological and psychological reactions to space, including various regimes of artificial gravity.

The crewman's role in such a station would be one of maintenance and repair of the station and its equipments, making alignments and modifications, and operating various experiments.

Much preparatory work remains to be done before we are ready to launch a fully operational station, hopefully by the late '70's.

Our next steps in manned space flight must be directed toward key issues not yet resolved. We must investigate the physical and psychological impact on man of long duration flight missions in terms of months and years rather than days and weeks. We must develop and qualify long-life, on-board systems to support and sustain man and to operate his spacecraft. Other major tasks to be done include the demonstration of escape and rescue; the role of the crew in operating automated equipment; development of maintenance and repair techniques; and the design and development of economical logistics systems to resupply space stations and rotate crews.

There is evidence to indicate that the Soviets intend to establish an orbiting space station. They have tested a number of spacecraft of the Soyuz class in recent months, including an automated docking maneuver, and their stable of launch vehicles is equipped both to launch sizable payloads to set up the station and to provide logistics support.

A second proposal included in the FY 1970 Budget would follow up Apollo with a vigorous program of manned exploration of the Moon.

Apollo has developed our basic capabilities for exploring the Moon, for determining the nature of its resources, and for exploiting its usefulness as a base in orbit about the Earth.

Although it is uncertain what the Moon may ultimately be worth to mankind, its resources will not likely be discovered without further exploration, for the same reason that early voyagers to America were unsuccessful in estimating its potential.

Our position of leadership among nations will not stand for long if we succeed in sending men to the Moon and then stand by while others explore it.

The Earth and the Moon, by astronomical standards, are a double planet, likely to have been formed of the same materials, by the same processes, and during the same time period. A nearby planet with a diameter one-fourth that of Earth can hardly be discounted as having no value to the future development of our space position.

Many craters on the Moon represent deep gouges into its depths -- for tens of thousands of feet -- whereby the interior materials are made accessible for study without excavation. If minerals of value exist on or within the Moon, exploration of craters from a base nearby would prove relatively easy.

There is always the question as to what can be learned from such an opportunity to explore the surface and subsurface features of a body like Earth and our nearest neighbor in space. Already geologists spurred by studies of the lunar surface have determined that the Sudbury crater in Canada, where the International Nickel Company has major holdings, was apparently formed initially by impact of a meteor and subsequently erupted volcanically because of weakened surface structure. This theory seems to fit many features on the Moon, but proof of this, and many burning questions that follow, remain unanswered.

A third proposal addresses the need for continued efforts to understand and put to use what space can mean to men on the Earth. A number of significant projections can be made regarding Earth-directed application of our satellites. With the rapid strides being made in our communications program, it is reasonable to expect that we shall have the capability in about 10 years to provide world-wide distribution of television broadcasts to local community receivers, and about 5 years later the ability to send these broadcasts directly into the home on unmodified receivers. In 10 to 15 years, technology will advance to the point where an operational world-wide navigation and control system will be feasible. In about 10 years we can reach the stage of development in our meteorology work where the feasibility of accurately forecasting weather for two weeks into the future will be established. It is also possible that in about five years experimental satellites will demonstrate the utility of using data from remote sensors to help in the discovery and management of the surface resources on the Earth. The time is near at hand when this nation should consider the creation of broad new organizational approaches within the Executive Branch to develop imaginative, coordinated programs for the application of this evolving technology to national and international needs. Absent other authority, NASA would presumably continue in the role it has filled in the past, that of proceeding with the development of a limited number of new systems through the proof of concept stage, and then turning them over to user agencies for operational development and use.

A fourth proposal is a program of continued exploration into deep space, both by unmanned probes and by the use of both manned and unmanned astronomical space observatories. Under present budgetary restrictions, we will be forced to abandon our programs for sending probes to de space after the early 1970's, and leave this field to the exclusive domain of Soviets. I believe the kinds of questions that prompt us to go to the planets are pertinent ones for the 1970's and 1980's; does life exist or has it ever existed elsewhere in the solar system? Can other planets be made suitable for Earth life? Will knowledge of other planets unlock secrets regarding the origin of our own planet or of the solar system? As to manned planetary exploration, the advisability of manned voyages should not be seriously considered until we have completed an exhaustive probe of our neighbor~~s~~ planets ~~plans~~ with unmanned systems and have determined whether manned missions would be desirable or, indeed, even possible.

A fifth proposal is to continue the advancement of technology in the many fields related to space activities, such as systems for converting nuclear or solar energy to electrical power; materials research; biological research; extending the endurance and reliability of systems for manned missions; continuing work on nuclear propulsion systems; and so forth.

A sixth proposal deals with aeronautics. Work in this area will be directed to such areas as noise abatement, flight safety features, short take-off and landing aircraft, improved electronics systems in aircraft, and improved air traffic control systems.

I would now like to speak to what may be considered as some of the larger issues and challenges involved in considerations about future directions.

The space effort can be viewed as a movement of man to satisfy his intellectual appetite for discovering, understanding, and controlling the elements of his total environment including himself. The ability to fly men in outer space not only allows us to learn new facts, but to see the world and ourselves from a new perspective.

This country's advancement into outer space is more than a reaction to the challenge of Sputnik. It represents a logical progression of the technologies which grew out of the challenge to creativity by the Second World War, which was the last occurrence before the Space

Age which harnessed this nation's energies as space has done. The space effort has combined, refined, and advanced the developments of World War II in the areas of synthetic materials such as butyl rubber and nylon, nuclear energy, jet engines and rocket propulsion, microwave technology such as radar, computers and electronics, and the management techniques which enabled this country to control the large scale efforts required in that wartime period. But even though the space program represents a continuation of that earlier challenge to our creativity and used all of the basic developments, it is directed to broader goals than the winning of a war and therefore permits greater scope for imaginative developments in science and technology. It was your vision, and that of those who worked with you to draft the National Aeronautics and Space Act that the space program remain balanced, broad-gauged, and with a content that inspired man to his best forward-looking efforts. Despite the many demands made on NASA over the past 10 years, for "firsts" in space to capture the public's attention or for short-range scientific innovations realizing quick gain, we have largely succeeded keeping the program balanced and moving toward its long-term goals.

Over and above the many challenges NASA yet has to face to accomplish its specific missions including that of the Apollo manned lunar landing and return to Earth, there are a number of basic challenges for the space program both in the present and for the long run.

One of these present challenges is how to work out more effective patterns for advancing the basic areas of science and technology needed to assist and support other government agencies in the many programs which can benefit from the scientific, engineering, and management know-how of space. NASA always has carried out its activities so as to assist agencies such as the Department of Defense, the Department of Commerce, and the Federal Aviation Agency in carrying out their research, development and test projects. More certainly needs to be done in fields such as civilian aeronautics. Up to recent years the steady transfer of technology from military flight programs ensured a measured advance in aeronautics, but the shift to missiles and the extreme specialization in military aircraft has decreased the amount of technology transferable to civilian aircraft uses. In part to fill this void, NASA, which has authority to carry out developments in aeronautics, has pursued certain research ideas until the concept was proved as practical for application to civil aviation needs.

But in addition to this independent type of effort, we are exploring with the Department of Defense, the Department of Transportation, and other agencies how best, in each of the areas where NASA's competence is important to progress, to bring together and to extend these joint governmental efforts. For example, it may be, as in our work with the weather satellite systems, that NASA will be able to assist in rounding out the analysis of the projected functioning of an entire operating system by studies which will show whether the total system is practical in terms of dollars and cents.

Another challenge we face is to develop booster power to preserve our options to operate in space for all purposes. The Soviet Union is working on a booster larger than our Saturn V -- and this at a time when we are not able to sustain production of that launch vehicle beyond the number which must be produced to cover Apollo contingencies. Without the ability to launch large payloads this nation will not continue to be present at the bargaining table when the big decisions subject to control through mastery of the space environment are made. Despite the reduced budget this year, we are holding together a limited number of nuclear rocket development cadres so that if a decision is made to proceed with development of an atomic fueled booster, we will not have to start from too low a level. We are also studying the possible need for developing a booster with a smaller payload capacity than the Saturn V, but which can be operated at a lower cost per pound in orbit than that of the large booster.

I feel that NASA also must view as a major present challenge the need to extend the objectives of the space program to assist, directly and indirectly, in working out the solutions to the country's pressing internal problems. NASA has a role in helping to solve these problems which are disrupting the functioning of this nation, as well as a role in the enrichment of the quality of life in America. At the very minimum, the existence of a space program as a major national activity helps to create the kind of problem-solving and forward-looking environment for arriving at viable approaches to issues such as city disorder, transportation snarls, and pollution of the air and water.

Another indirect contribution of the space program is the precedent we have established for bringing together the supervisors in government, the doers in industry, and the thinkers in the universities in order to accomplish the very difficult technical and management jobs we have been faced with. This precedent, as well as some of the actual working relationships which have developed, may be drawn upon for attacking, upon the basis of the mobilization of our total national competency, these large-scale problems which require the teamwork of the government supervisor, the industry doer, and the thinker. And I add here, that a number of our universities are now richer national resources because of the multidisciplinary studies which NASA has encouraged and funded. In these space-related studies at least some of the traditional barriers to thinking across the lines of academic specialties have been broken down.

Beyond these indirect contributions, NASA's program has provided direct stimulation to areas of the country such as Huntsville, Alabama, and Cape Kennedy, Florida, to the many not-so-famous universities and colleges who participate in NASA's work not on the basis of proven excellence but from the demonstration of the capacity for excellence, and to the several hundred thousand men and women who are and have been a part of the space program's work force.

Going one step further, NASA has something to offer to law enforcement in terms of data processing and communication systems; to the construction industry through NASA-developed materials; to pollution control through the development of an outlook whereby the Earth's air and water are beginning to be viewed as finite resources operating as closed systems; to transportation of people in and out of the inner city through research on short-haul aircraft; to improvement of economic opportunities for all citizens by stimulating business through new inventions and transfers of space technology to industry; and to a richer life by development of techniques making possible cheaper, lighter, and more reliable television sets and other electronics items for use in the home.

In listing some of the long-term challenges of the space program, it becomes clear that some of these challenges are the result of activities which we have successfully engaged in during the past 10 years -- the challenge lies in carrying out these functions better and on a larger scale in the future.

In the area of international law, for example, the fact that this nation and others have explored space has provided a great opportunity for reexamination by nations of their national interests and the achievement of broad measures of international agreement and understanding. The Outer Space Treaty of 1967 is a good example of the realization by many nations that the relatively untrammeled environments of outer space and celestial bodies should remain available for the benefit of all mankind; and that the conduct of activities in outer space and on celestial bodies should be subject to an international code. The area of disarmament, Article 4 of the Outer Space Treaty reflects an agreement to bar orbiting weapons of mass destruction from outer space or from celestial bodies or space stations. As of October 8 of this year, 89 states have signed the Outer Space Treaty, 31 states ratified it and 7 states acceded to it. The recent Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Space Objects is another example. As of October 8, the Agreement had been signed by 74 states and ratified by 2 states. States with widely divergent political, social, economic and legal systems and philosophies have proved their ability to come together and achieve mutual understanding. As we pursue new activities such as oceanography, it will be a challenge to apply the precedents set by the Space Treaties in achieving additional international agreements.

The past opportunities which the space program has provided for initiatives in foreign policy gives the promise of further initiatives in the future. The space program has projected across the entire worâd a vivid contrast between American openness and Soviet covertness in matters of advanced technology. The provisions of the National Aeronautics and Space Act of 1958 declaring the Congressional policy "that activities in space should be devoted to peaceful purposes for the benefit of all mankind," and placing the control over aeronautical and space activities in a civilian agency has emphasized to all people the concern of this nation that the space frontier remain a peaceful arena. Our space accomplishments also have provided a new basis for American foreign policy initiatives which have included the development of new and cohesive international instiutions like INTELSAT.

Our national efforts also have made possible the generation of new, highly visible bilateral and multilateral space pojects of increasing value in the developed and developing worlds, stimulating the quality of scientific and educational institutions in developing countries and, by providing a domestic outlet for their talents, helping to stem the flow of scientists from developing countries. Within the space sciences field, NASA has been able to engage scientists of over 70 countries in cooperative space flight and space support programs, including the successful launching of ten foreign satellites and hundreds of scientific sounding rockets. Secretary Rusk has described the space program as one of the few positive factors in America's "world magic" today. The daring and imagination of space projects conducted in the open and under civilian control, epitomized by astronaut flights and buttressed by a forward-thrusting technological base, represent Americans as the world has long thought of Americans and as the world, and ourselves as well, wish to think of Americans. Space accomplishments and programs also offer further means to bind other countries to us for cooperative projects and significant international service programs such as in weather and communications.

In closing, I want to emphasize the opportunities which the space program offers to this nation to compete and cooperate with other nations, including the Soviet Union, in a manner which increases our own scientific and technical capability while contributing to a stable world order. Space offers a continuous opportunity to this country to exert its best efforts -- a rallying activity to bring our citizens together in a program in which all can be interested and involved. Space exploration can become, in this way, a national goal which stimulatescreativity and hard work without increasing hositility toward other nations. As the new frontier for the United States, space has unlimited scope for thought and exploration and it satisfies the spiritual aspirations of man while providing tangible benefits.

Beyond providing very useful national goals, space is becoming a measure of the standing and power of a nation on the world scene. To remain a world power we must remain, over the extended future years, a strong and advancing space power. Other pressing domestic and international needs must of course be reckoned with in the short run, but I feel NASA has demonstrated that an investment in space pays big dividends. It pays dividends not only in economic terms, but a national accomplishment such as the landing of men on the moon and their safe return to Earth would be a priceless legacy to future Americans and to mankind.
